An Essay
... on ...
Scarlatina.

Respectfully submitted to the Faculty of the

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by

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Scarlet fever or Scarlatina.

This is a contagious febrile disease, characteriged by a scarlet rash, and inflammation of the fauces.

It was long compounded with measles, and even after it was first described, was still thought to be a mere variety of that disease. Ingrassius was the first who deacribed it as a distinct disease, in a book published in 1556. It was afterwards noticed by French and English physicians; but Dr. Withering described the disease after an epidemic, that occured in Birmingham in 1778. After stating his conviction that the sore throat of Fothergill, and the sore throat observed by him were identical, and that it was merely a variety of scarlet fever: states that anasarca sometimes occured after the ulcerated sore throat. He is

generally awarded the credit of having first fully and clearly pointed out the distinctive marks between it and measles; and of establishing the claims of Scarlatina to its present position.

By modern authors it is divided into three varieties:- the simple, the anginose, and the malignant. After the disease has been described generally, we will then endeavor to point out the distinctive marks between the several varieties.

No doubt many cases occur in which there is little, if any dipficulty in determining to which variety they belong. Yet it very often happens that they are so blended as to make it impossible to distinguish to which class a particular case belongs.

The primary fever may be sudden in its attack; or the patient may complain

for some days of slight indisposition and languor. Generally it sets in at once with shivering, followed by a hot and dry skin, lassitude and great debility, nausea and vomiting, pains in the back and limbs, thirst, frequent pulse, flushed face, furred tongue, and great muscular weakness; sometimes there is headache or restlessness, delerium, stupor, coma or convulsions.

The fever may vary from the mildest form up to the highest point of violence and danger. These symptoms continue with more or less violence for two or three days, and then the characteristic rash makes its appearance. It may be seen in the mouth and fauces twenty four hours after the febrile symptoms supervene, together with the irritation or inflammation of

the fauces, which upon examination appear red and swollen. The interior of the mouth presents the same appearance; and the tongue though coated with a white or yellowish fur, exhibits the red and exaggerated papillae projecting on its surface, and is red at the tip and edges. The red points increase and the white fur clears away, leaving the tongue red and rough, which has given to it the name of Strawberry tongue, and is one of the diagnostic signs of Scarlatina.

If the disease goes on unpromisingly, it will sometimes get hard, dry and brown; it is usually moist throughout the course of the attack.

The pulse is said to be more frequent in this, than in any other form of fever; even in mild cases reaching from one hundred and twenty to a hundred and sixty in a minute, in the

first few days. This like all the other symptoms varies; it may be much lower.

The rash makes its appearance generally about the second day, frequently, however, earlier or later. It occurs usually first upon the face, neck and breast, and then gradually spreads over the trunk and extremities; it reaches its maximum about the third or fourth day. When first seen, it is in minute red points, which soon coalesce in patches, and form large portions of scarlet colored surface. The eruption is not always equably diffused over the surface. Sometimes it is very scanty, and is confined to patches, with healthy portions of skin between; but it generally covers the whole surface in a greater or less degree. The face and neck generally have the redness equable diffused over them, And it appears with great intensity in the flex

ures of the joints. It is often most intense upon the back, and is of a deeper color than elsewhere. The color of the rash has been compared to that of a boiled lobster; in some cases it is much darker, and in others lighter; it disappears under pressure.

Whatever increases the general excitement, has a tendency to deepen it. Therefore the color is more intense during the exacerbations of the fever, and when the patient cries, or is in anyway irritated. The rash is not perceptibly elevated, and is smooth to the touch. Sometimes there is a certain degree of roughness on the limbs and anterior part of the body, occasioned by enlargement of the papillae of the skin. The skin is generally swollen, especially in the face, hands and feet, which causes the movements of the hands to be stiff and painful. There is in most

cases a feeling of burning, irritation and itching in the skin. Associated with the rash, may ~~frequently~~ be seen little transparent vesicles, resembling sudamina; they usually appear on the thorax, and on the front and sides of the neck.

The fever does not abate upon the appearance of the eruption, but continues with more or less violence throughout its course. The pulse continues strong, full and frequent.

The skin is dry and burning hot, as a general rule; loses its usual softness, and the temperature of the body is increased from 105° to 108° Fahrenheit,

The fever exacerbates toward evening, and is sometimes attended with delerium and comatose symptoms.

The bowels are generally moderately constipated, but diarrhoea may occur in

the advanced stages.

The affection of the throat is in some cases scarcely perceptible; but very often it assumes a dangerous form from the first; being attended by internal and external swelling, which interfering with deglutition and respiration may cause unpleasant results.

The disease attains its height from the fifth to the seventh day; when, if the attack be mild, and its course favorable the symptoms begin to decline.

The rash fades, the skin assumes its natural temperature; the pulse becomes natural; the throat symptoms abate; and the tongue begins to wear its natural appearance. This favorable change may be accompanied with a profuse perspiration, which may be regarded as critical; it is frequently

wanting, and yet the case goes on to an early termination.

From what has been said of the disease, it might be looked upon as a comparitively mild affection; but it will often prove much less favorable.

Death may occur in the first stage from the force of the shock upon the nervous system; or it may occur at any time during its course from complication with any of the vital organs. Gangrene of the throat, or the exhausting purulent discharges which are apt to remain after the original disease has passed, may be suppicient to cause death.

Desquamation begins with the decline of the eruption. Usually coming off in scales; where the cuticle is thick, as upon the palms of the hands, and the

soles of the feet it sometimes comes away in large flakes. Watson says: a whole glove or slipper of cuticle may come off in a single flake. During the period of desquamation there is great irritation and itching of the surface. If there are no new exfoliations, it is generally completed by the end of the second week. If the disease has passed up to this point without unpleasant complications, the patient may be considered as well; though yet liable to dangerous disease, if too early exposed.

Scarlatina Simplex - This variety as its name implies is the mildest form, and merely has the fever and eruption, without any very severe affection of the throat. The fever may be so slight as to cause the patient but little inconvenience.

But it may be more definit in its character, and therefore, requires to be noticed. The usual symptoms are debility and indisposition; nausea and vomiting; frequent pulse; heat of the skin; thirst; headache and stupor. The rash makes its appearance as a slight scarlet blush; pervading the surface generally, which remains until about the fifth day, and then declines. It may be more intense — of a deeper color — the skin swollen and painful to the touch; and during the exacerbations of the symptoms at night, there may be delerium. This form is apt to have dropsy follow it, from too early exposure.

Scarlatina Anginosa. — There is in this variety a greater degree of the

throat symptoms. At the commencement, there are frequently no symptoms by which to distinguish it from the simple form. But soon there is pain in swallowing, and soreness of the throat. The rash may not make its appearance on the second day, and may not be so regularly diffused over the surface of the body. It may be confined to the wrists and hands, or some other part; or it may be scattered in patches over the surface, with healthy skin intervening. It may disappear suddenly after having appeared. It may often be seen, generally diffused, and as uniform as in Scarlatina simplex. The fever is more severe, with a more frequent pulse, and a greater tendency to delirium, than in the other

form. As the disease advances the inflammation of the fauces continues increasing, and upon examination will be found swollen; the pharynx is inflamed, and the tonsils enlarged and red. Upon the surface may be seen patches of a concrete exudation, resembling false membrane. These patches which cover the fauces, and extend into the pharynx as far as can be seen, are of a dirty white, yellowish or ash color. They may be wiped off, which will reveal the fact of no ulceration existing beneath them, leaving the surface merely reddened and without organic change. The submaxillary and lymphatic glands are swollen and sensitive to the touch; and in severe cases become very large and hard. The breath has a peculiar and offensive odour.

The swollen condition of the parts may interfere with deglutition, respiration, and the free return of the blood through the jugular veins; thereby, causing a tendency to coma.

There is sometimes secreted in the fauces a viscid mucus, which the patient has difficulty in swallowing, or discharging from the mouth. The mucous membrane of the nose may become involved, and the nasal passages become blocked up by the swelling, and the crusts that form upon their surfaces, causing the patient to breath through the mouth, producing dryness of the tongue and lips. Frequently there is an offensive, strawcolored discharge from the nose, of an acrid character, which excoriates the orifices of the nostrils, and the

upper lip. There may be discharges from the eyes and ears. A similar secretion of the fauces may be swallowed and produce diarrhoea of an acrid character. The tongue may be coated white and be moist, or be a deep red smooth and glossy; or it may be rough with projecting papillae.

Desquamation begins later, and continues longer than in the simple form. The throat symptoms and fever may continue for sometime after the commencement of desquamation. If there has been much swelling of the neck, recovery may be considerable postponed by the suppuration which takes place; and the other secondary affections which are likely to occur, may make

the result doubtful at best.
This variety is more fatal than
the simple form.
Scarlatina Maligna— This name
is applied to all cases of extreme
violence, in which the system is
prostrated at once, or in which the
symptoms are of a low or typhoid
form. Any of the other varieties
may have this character, as the
affection of the throat is not
essential to the malignancy of
the disease; there are, however,
some peculiar throat symptoms
in this variety.
In some attacks the patient is
suddenly prostrated; the nervous
system sinks under it, and the
patient dies before reaction has

been attained.

Frequently the violence of the attack is not so sudden, or severe, but comes on as do the other forms, soon, however, to be displaced by symptoms of a more dangerous character - such as a small, feble and irregular pulse; hurried and oppressed respiration; faintness and great anxiety. The rash appears late, and is of a dark or livid color; or disappears soon after; there may be apthous elevations in the throat, which burst and expose the surface of a dark and gangrenous appearance. The rash does not always show itself, and the face may be pale, together with early delerium and stupor; and the tongue

coated with a dark brown fur.
There may be feeble attempts
at reaction, but they soon cease;
and the patient sinks and dies
upon the second or third day.
If the symptoms are not so severe,
or the patient has a good constitu-
tion, reaction may be established,
and a low form of fever developed,
attended with feeble circulation; a
pale, purplish, or dark red rash; de-
lerium or stupor, petechiae; passive hem-
orrhage from the mucous membranes,
involuntary alvine evacuations; slough-
ing of the soft parts of the throat;
and in most cases followed by death in
a week.
There are many cases in which the symptoms
will not be so evident, and the case be con-

sidered as of a mild and comparatively pleasant type; and danger not anticipated until the pulse becomes weak, though still frequent, and a disposition to delerium and stupor develops, or convulsions suddenly appear. The rash may disappear, and the throat symptoms become worse. In some attacks the rash does not appear until the third or fourth day, and then only partially; it may be of a dark red or livid color, and may disappear and reappear a number of times. As the disease advances the symptoms become more malignant in character; pulse becomes feble, and the skin cool, rash disappears, petechiae & ecchymosis may appear; the exudation in the fauces is of a darker hue, some-

times quite black; true gangrenous eschars with deep ulceration, and distruction of the soft parts frequently occurs; the odor of the breath, in this form, is fetid; the tongue is coated brown, and the teeth and lips covered with a dark sordes; the urine may be bloody, and hemorrhages occur from all the mucous membranes; diarrhoea sets in, which assists in undermining the patients strenght, and if speedy relief be not given, collapse takes place, with sunken features, cold clammy skin; small fluttering pulse, and involuntary stools; ending in death in a week or two.

There are some constitutions of such powers of endurance, as to be able to withstand the whole course of the dis-

ease, and the exhausting purulent discharges from abscesses which are apt to follow, and yet ultimately be restored to health.

There is a form of scarlatina without the eruption. When this is the case the violence of the disease is spent upon the throat. It is said that desquamation occasionally takes place at the regular period. This form is capable of imparting any of the other forms of the disease.

Sequelae - There are few diseases which leave behind them more suffering than does scarlet fever. Children who have suffered an attack are apt to have developed some of the chronic forms of scrofula - such as boils, strumous ulcers, diseases of the scalp,

sores behind the ears, swelling of the cervical glands, and chronic inflammation of the eyes and eyelids. Among the most troublesome are the abscesses which form in the vicinity of the parotid and submaxillary glands. Inflammation often extends into and through the Eustachian tube, sometimes involving the tympanum itself; producing a partial or total loss of hearing by the closure of the tube, or by a distruction of the membrana and the bones belonging to it. An abscess may form and open into the external meatus, and gives rise to an obstinate discharge of offensive pus. The inflammation sometimes extends into the nostrils, and an obstinate Ozena is developed. Diarrhoea may

be classed among its sequelæ.
Swelling and pain of the large joints resembling rheumatism; friction relieves the pain, and by that may be distinguished from rheumatism.
The most common and serious of all the consequences is dropsy.
Generally present in the form of anasarca, though it may appear as ascites, hydrothorax, hydropericardium, or hydrocephalus. It follows mild cases more frequently than the more violent, on account of exposure during the period of desquamation; or while yet the new cuticle is tender, and in cases occuring in winter.
It occurs from the fourteenth to the twenty eight day after the commencement of the fever. The urine is

said to contain albumen at some-
time during the attack.
Diagnosis. - Before the eruption appears
it may be mistaken for many other fe-
brile diseases. The most characteristic symp-
toms are frequency of the pulse, and inflam-
mation of the fauces. After the rash
has appeared it may be compound-
ed with measles; from it, it may be
distinguished by the want of catarrhal
symptoms, and the appearance of the
eruption on the second, instead of the
fourth day, and by the presence of the in-
flammation of the throat. The rash
is smooth in scarlet fever, and in
measles rough. It is generally diffused
in scarlatina, and in measles col-
lected into crescentic groups; and it is
of a boiled lobster color, and in measles of a raspberry

tint.

The prognosis is generally favorable in mild cases, although it frequently proves fatal in the mildest forms. It is most favorable if the patient has a good constitution, and there are no complications.

If the rash is late in appearing, slight, or suddenly recedes, together with delerium, or coma, or the rash is livid, or varies from the natural color; with petechiae, hemorhage, dark appearance of the fauces; ulceration or gangrene of the parts; inflammation of any of the vital organs, great prostration, cold skin, weak pulse and involuntary discharges, the result will generally be unfav-

orable. If the lungs is invaded, it will be unpavorable.
More unpavorable in adults than in children, especially pregnant females.
It is well under all circumstance to be careful in giving a decided opinion as to the result of any case; as the changes to which it is liable cannot be foreseen, and the result may disappoint those most interested.
Causes- They are not known; believed to be contagion operating through the medium of the atmosphere. It occurs epidemically, or endemically; and at all seasons of the year; most frequently in autumn and winter. Epidemics differ

in violence; great difference exists in the same epidemic- all the varieties may exist in the same epidemic All ages are liable to attacks; but children are more so than adults. It occurs but once, as a rule. Whether the contagious principle is constant, or only during certain stages of the disease is not known. It is asserted, that the contagious element may exist in fomites for years. The incubative period varies, generally an average of ~~five~~ nine days.

Pathology- Sometimes there are no changes to be seen after death. The eruption may continue or may disappear; or remains of it may be seen in purplish or livid spots. Inflammation of the fauces, exudation and ulceration; and gangrene may be seen,

extending into the pharynx and oesophagus. The larynx is occasionally involved; the blood varies in appearance, sometimes red or dark; at other times watery or thick. Any of the organs may be involved, and present evidence of inflammation. The mucous and serous tissues are often inflamed.

Treatment - In the simple form, Bell. will generally be found sufficient. If the fever is high it may be preceded by Acon., or they may be given in alternation Bell. will be of service throughout the course of the disease, when there are spots of a dark red, or scarlet color on the face or other parts of the body; submaxillary glands swollen; eyes red, pupils dilated; tongue

red, hot and dry; throat and tonsils, dry, inflamed and swollen; pulsations of the temporal arteries, pulse small and quick, or strong, full and quick; vertigo, fulness, shooting and expansive pains in the head, worse on motion, contact, or upon going into the cold air; mouth dry and hot, great thirst; cough and difficult respiration; restlessness and delerium; worse in the evening or night. Bell. may be considered as a specific for pure scarlatina, Acon. The special indications for its use are- red, hot and bloated face, or alternately red and pale; purple spots; pulse hard, frequent and full; respiration rapid and difficult. headache aggravated by talking, or motion,

thirst, coldness of the surface, with internal heat, or burning over the whole body, bruised pains in the back and limbs; irritable and despairing; or gay and hopeful disposition.

Spec. May be of service in the beginning, when the gastric symptoms are troublesome, and there is no rash, or the rash has disappeared, the symptoms requiring it would be nausea and vomiting, loss of appetite; sensation of debility in the stomach, colic; diarrhoea with nausea, griping and vomiting, itching of the skin; face pale, sallow, yellowish and bloated, livid circles round the eyes; desire for different things - symptoms worse toward evening.

Puls. This remedy will be of service if there is a retrocession of the rash, with gastric symptoms, headache, vertigo, shiverings, weakness, nausea, and vomiting, nosebleed, hasty, anxious and oppressed respiration; great desire for acid drinks, thirst, diarrhoea at night with pain in the bowels; sensitive or melancholy disposition, and when the symptoms are worse at night.

Merc. Sol. or Vir. Either of these remedies will be useful when there is stinging pain & difficult deglutition, salivation; white coated tongue which retains the indentations of the teeth, and when there are ulcers in the mouth, throat and upon the tonsils, covered with ash colored sloughs;

acrid discharge from the nose and eyes. swelling of the submaxillary and parotid glands.

Rhus. tox. If typhoid symptoms appear attended with small and frequent pulse; tongue and throat red and dry, hot, dry skin, livid color of the skin; fading away of the eruption. It may be of service in the early stages when there is a disposition to malignancy.

Bry. If there is pulmonary trouble, difficult and anxious respiration, sensation of weight upon the chest, pains in the chest; dry cough; sensitiveness and soreness of the whole surface; delerium, restlessness, contracted

or dilated pupils; dull pain in the head worse upon motion; high fever.

Opium. Will be of service when there is drowsiness, stupor, stertorous breathing, open mouth, eyes half open, red and puffed face, delerium, convulsions; pulse slow and labored, retention of urine, and whenever signs of paralysis of the brain show themselves.

Zincum. Is recommended when paralysis of the brain is threatened or when it already exists; stupor alternating with delerium, icy cold skin; small and frequent pulse, fixed and stupid expression of countenance, tremor and paralytic condition of the extremities

The mineral acids will be of great service in the malignant form, when the salivary glands are inflamed and swollen, dark ulcers with sloughing; great debility, lassitude, tremors, obtuseness of intellect, cold extremities, and other signs of a typhoid condition. They may be of service for the hemorrhages which sometimes occur, and are of particular use after the administration of Merc. Arsenicum. This is a remedy of great power in the advanced stage of the malignant form, when there is extreme prostration, nausea and vomiting; pain in the stomach, and bowels, diarrhoea; eruption of a livid or mahogany

color; ulcers dark and foul, tongue and lips dry and black, pulse small, weak and frequent; cold clammy sweats, and hippocratic countenance.

Carbo. Veg. has a similar train of symptoms.

Cupr. acet. In retrocession of the rash followed by cerebral symptoms, quick, small, weak and irregular pulse, temperature reduced sweat, restlessness, delerium, or convulsions. the nervous system always involved.

Sulph., Iodine, Bry., Phos., and Bell., may be of service, and promptly restore the eruption after having been prematurely repelled.

Sulp. & Calc. Carb., May be valuable

remedies in cases occuring in a person of a scrofulous diathesis, and these has not been the improvement there should have been.
Or when the rash is fully out, and there is high fever they may prove of great value in warding off unpleasant and dangerous sequelæ.
Nux. Vom., When there is a viscid mucus secreted in the fauces, which tenaciously adheres, and cannot be expelled or swallowed, and, sometime, even threatens suppuration, may prove of considerable efficacy.
For the restlessness which attends scarlet fever. Cham. Coffea Acon & Bell. will generally suffice.
For the dropsical troubles which

follow. Acon., Hellebor. nig., Apis. mel., Digit., Bry. Camp. ind., Ars., Rhus tox., all the above remedies may be of service to expect the cure.

For the swelling and suppuration of the glands Merc., Baryta, Hep. Sulp., Calc. Carb., Silic., Dulc. & Rhus tox., Deafness. Otorhoea, Opthalmica and Coryza. are among the diseases which follow and must receive a care. the remedies which will be found of most service are- Merc., Ars., Puls., Hep. Sulp., Calc. Carb., Agar. musc., Aurum pot. & mur.,

If symptoms of croup come on the appropriate remedies must be applied - Acon., Spongia. &c.

The body may be anointed with lard several times a day. it is gen

orally grateful to the patients feelings and allay the itching and irritation of the surface.

Bell bears quite a reputation as a prophylactic agent against scarlatina, and when it does not prevent it, it at least modifies the character of the disease. It is has been used, and still is by the old school, but in much larger doses, than is necessary. The exhibition of Bell. as a preventive of scarlet fever need not be attended with any unpleasant consequences; on the contrary it will prove efficacious. The dilutions may be given from the 1st to the 30th a dose once or twice a day. The

patient must adhere strictly to a homoeopathic diet, while using it.

The Temperature of the room must be in accordance with the patients feelings. Care being taken not to allow sudden changes or draughts of air to blow over him. Cold water may be given the patient as a drink, but must not be allowed to come in contact with the surface, Cold in any form must be kept from the skin. As longs as small particles of the skin come off, or the cuticle is yet tender, the patient should not be allowed to go in the open air.

There is generally very little

desire for food, during the febrile stage, and only the mildest can be allowed - toast-water or weak barley-water may be given, and after the fever has passed, care must be taken, and a return be gradually made to more nourishing diet as a want of care in this respect may be productive of serious consequences.